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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/822,891

**Applicant(s)**

CANDELORE ET AL.

**Examiner**

ALFONSO CASTRO

**Art Unit**

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
- Paper No(s)/Mail Date 08/11/2008; 5/5/2008
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

DETAILED ACTION

***Response to Arguments***

1. Applicant's arguments with respects to claims 1, 5, 15, 19, 26, and 28, filed July 7, 2008, have been fully considered but they are not persuasive.

Regarding applicant's arguments with respect to rejections under 35 USC 102(e), applicant argues the elements not found in Flickinger are not found in the second reference in the Office Action. However, the applicant argues the second reference is the Provisional (60/229,156) (hereinafter "Provisional") but the second reference in the Office Action clearly states "the second reference 'MPEG-2 Transmission' page..." was used in the multiple reference rejection under MPEP 2131.01. Flickinger's related application data, the provisional information, merely indicates the provisional filing date. The second reference was submitted as evidence of what was in the public's possession before applicant's invention.

Applicant further argues the disclosures of cited reference "does not provide a disclosure for using macroblocks of data to produce main content for display or substitution and does not place this disclosure within the public domain". Flickinger discloses "inserting ads in a portion of the display ...management of ads which are inserted into a portion of the screen during the actual programming" (page 2, [0041]) which therefore teaches that the actual programming corresponds to applicant's "main content" and the ads inserted into the actual programming is the "substitution content data" because the ads inserted into the display replace/or substitute the original programming.

Regarding applicant's arguments with respect to rejections under 35 USC 103(a), applicant argues the elements of claims 5, 15, and 19 are not found in Flickinger in view of the Provisional, but applicant's arguments do not take into consideration the state of the art and the teachings of the second reference. The second reference, not the Provisional, was submitted as evidence of what was in the public's possession before applicant's invention and to focus on what a person of ordinary skill in the pertinent art would have known at the time of the invention and on what such a person would have reasonably expected to have been able to do in view of the knowledge.

Regarding applicant's argument's regarding receipt of a flag, the applicant's claims convert the inventive contribution over the prior art. Flickinger solves the problem of the need to use a "flag" as disclosed by applicant for automatically detecting a location where a substitution of content is to start and end (Flickinger--0041, line 17-19—teaching avails) and additionally teaches: 1) scheduler 912 that receives instructions on when ad should be played or substituted ([0094], line 1-10) and 2). "management of ads which are inserted into a portion of the screen during the actual programming" (page 2, [0041]) which therefore teaches that the actual programming corresponds to applicant's "main content" and the ads inserted into the actual programming is the "substitution content data" because the ads inserted into the display replace/or substitute the actual programming.

2. Applicant's arguments with respect to claims 1, 15, 26, 28 have been considered but are moot in view of the new ground(s) of rejection. Independent claims 1, 15, 26, 28 have been amended.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flickinger et al. PG Pub 2005/0210502, based on provisional 60/229,156 filed on August 31, 2000 (hereinafter "Flickinger"), in view of Hoarty US Patent 5,594,507 (hereinafter "Hoarty").

6. Regarding claim 1, "content substitution" reads on Flickinger (page 3, [0041] line 1-22 – invention used to insert ads into television programming or replace existing data in data streams where [0049] line 1-7 teaches ads are content);

"receiving data representing video content" (0028 lines 1-10; 0030 lines 11-14; and 0031 lines 1-5; and 0045 – transmitting video content);

Regarding "data having at least first and second packet identifiers (PIDs) associated with a first and a second macroblock of original content", Flickinger teaches ([0077] line 3-13 – a separate PID is created for each data stream and for each ad program stream. Flickinger's enabled disclosure for the transmitted data having PID associated with macroblock of content is shown in the second reference "MPEG-2 Transmission" page 2 (disclosing MPEG data stream comprising video access units and an access unit will be a complete encoded video frame where access units correspond to more than one macroblock associated with a respective packet identifiers). Flickinger does not specifically teach or refer to which PID is the "original" content. In an analogous art, Hoarty teaches data is "associated with a first and a second macroblock of original content" where a compressed digital overlay controller and method for MPEG type video signal that functions to substitute one macroblock for a corresponding macroblock for multiple video signals or data streams (Abstract & Col. 2, lines 16-40—teaching MPEG2 signal 1 and MPEG2 signal 2 where source 1 is the first signal (corresponding to "original") and source 2 is the signal to be substituted or overlayed). Hoarty further teaches that in accordance with MPEG2 encoding, for each encoded digital video source, successive contiguous macroblocks are identified over the entire

picture area and each macroblock in the picture are given a unique numerical address corresponding to "first and second macroblock of original content" (Col. 2, lines 34-40)). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify creating separate PID for each data stream or program stream by associating the original or first data stream or program stream with a first and second macroblock of content for each data stream or program stream as taught by Hoarty in order to accomplish substitution of a macroblock with a corresponding macroblock when receiving multiple program streams with separate packet identifiers.

"initiating processing of content having the first PID" reads on Flickinger ([0048] line 3-5, ads are transmitted to the STBs for storage until they are played corresponds to processing the first PID);

"determining that a substitution criterion has been met" reads on Flickinger ("substitution criterion" corresponds to Flickinger [0042] line 1-11 replacing existing data if desired into the data stream of designated avails by television service provider);

Regarding "substituting the macroblock having the second PID for the macroblock having the first PID comprising substituting a macroblock of original content with a macroblock that comprises substitution content data", Flickinger teaches "substituting the macroblock having the second PID for the macroblock having the first PID" where the system can be utilized for the management of ads which are inserted directly into a portion of the screen during the actual programming (the actual programming corresponds to applicant's macroblock having the first PID") where the

screen would have to be broken up into blocks to accomplish insertion (page 3, [0041] line 6-15). Flickinger does not teach "substituting a macroblock of original content with a macroblock that comprises substitution content data". In an analogous art, Hoarty teaches "substituting a macroblock of original content with a macroblock that comprises substitution content data" where a compressed digital overlay controller and method for MPEG type video signal that functions to substitute one macroblock for a corresponding macroblock for multiple video signals or video data streams (Abstract & Col. 2, lines 16-40—teaching MPEG2 signal 1 and MPEG2 signal 2 where source 1 is the first signal (corresponding to "original") and source 2 is the signal to be substituted or overlaid). Hoarty further teaches that in accordance with MPEG2 encoding, for each encoded digital video source, successive contiguous macroblocks are identified over the entire picture area and each macroblock in the picture are is given a unique numerical address corresponding to "first and second macroblock of original content" (Col. 2, lines 34-40)). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify substituting a macroblock of the content with the first packet identifier with a corresponding macroblock of the content with the second packet identifier by associating the original, or first data stream or program stream, with a first and second macroblock of content for each data stream or program stream as taught by Hoarty in order to accomplish substitution of a macroblock with a corresponding macroblock when receiving multiple program streams with separate packet identifiers.



"processing the substituted content" reads on Flickinger (0093 line 13-15 -- resulting program stream with the substituted content is sent to the display device).

7. As to Claim 2, Flickinger et al. teaches "carried out in a decoder forming a part of a television Set-top box" ([0035], line 12-16 -- integrated component of Set-top box decodes and encodes data and also inserts ads into the data stream). Also see Figures 5,6,9 and [0011, 0013, 0077, 0098].

8. As to Claim 3, Flickinger et al. teaches content substitution as discussed in claim 1 is "carried out in a hardware state machine" (Page 3, [0034], line 9-16 -- finite state machine understood to correspond to a hardware state machine).

10. As to Claim 4, Flickinger et al. teaches a method of content substitution is "carried out in a programmed processor" ([0034], line 9-16 -- teaching integrated components of Set-top box for inserting ads into data stream comprise processors [0034], line 9-16, [0035], line 12-16; [99] Col. 2, line 11-16 specification teaches circuit to be programmed general purpose processors).

11. Regarding claim 5 and 19, "the substitution criterion is met as a result of receipt of a flag", Flickinger solves the problem of the need to use a "flag" as disclosed by applicant for automatically detecting a location where a substitution of content is to start and end (Flickinger--0041, line 17-19--teaching avails) and additionally teaches: 1)

scheduler 912 that receives instructions on when ad should be played or substituted ([0094], line 1-10) and 2). "management of ads which are inserted into a portion of the screen during the actual programming" (page 2, [0041]) which therefore teaches that the actual programming corresponds to applicant's "main content" and the ads inserted into the actual programming is the "substitution content data" because the ads inserted into the display replace/or substitute the actual programming. Flickinger does not specifically refer to which PID is the "original" content in amended claim 1. In an analogous art, Hoarty teaches data is "a first macroblock of original content and second macroblock of substitution content" where method for MPEG type video signal that functions to substitute one macroblock for a corresponding macroblock for multiple video signals or video data streams (Abstract & Col. 2, lines 16-40—teaching MPEG2 signal 1 and MPEG2 signal 2 where source 1 is the first signal (corresponding to "original") and source 2 is the signal to be substituted or overlayed). Hoarty further teaches that in accordance with MPEG2 encoding, for each encoded digital video source, successive contiguous macroblocks are identified over the entire picture area and each macroblock in the picture are is given a unique numerical address corresponding to "first and second macroblock of original content" (Col. 2, lines 34-40). Therefore, it would have been obvious to one of ordinary skill in the art to use a method for automatically indicating when and where an ad is to be inserted or replaced by using an indicator for identifying the location of where ads or data is to be inserted/overlayed and replacing the original data stream with the substitute content as taught by Hoarty in order to provide efficiency in an automated substitution .

12. As to Claim 6, Flickinger et al. teaches "the substitution criterion is met as a result of an operator input" (0097, lines 1-9 updating or switching among multiple ads is determined by viewer selections input by user via remote control operation).

13. As to Claim 7, Flickinger et al. teaches "processing comprises playing the content" (0048 lines 3-5 content corresponds to ads are stored until they are played; 0093 line 13-15 – playing the content is part of processing steps where the resulting program stream with substituted ad is sent to television or other display device).

14. As to Claim 8, Flickinger et al. teaches "the substituting comprises using private signaling to select the macroblock of content with the second PID and discarding the macroblock of content with the first PID (0077 lines 1-12 content having PID; (0093, line 7-13 – the ad to be inserted is queued by a digital que tone transmitted in the MPTS and used to substitute the original ad). Also see 0074 and 0091 lines 1-7.

15. As to Claim 9, "wherein the substituting comprises using private signaling to select the macroblock of content on the second PID while receiving the macroblock with the first PID" reads on Flickinger (claim 8 discusses use of private signaling to select the macroblock of content and Flickinger further teaches main program being viewed while the designated replacement ads are received [0045] lines 3-6—and where each data content has a PID [0077] lines 1-12).

16. As to Claim 10, Flickinger et al. teaches "substituting is initiated and terminated by private signaling forming part of an adaptation layer of packets in a data stream" ([0093] line 1-15 --data stream carries digital cue tone used for identifying where the substituted ad is to be placed in the data stream corresponds to the private signaling used to indicate when the substitution is to be initiated and terminated. Flickinger et al. contains an enabled disclosure for signaling carried as part of the transport stream in an adaptation layer as shown in [0077] lines 1-18 and [0093] lines 1-16 and can be carried in an adaptation field in a transport stream packet as shown in "MPEG-2 Transmission" page 8 and 9 regarding transport packet adaptation layer. Flickinger et al. teaches this limitation for private signaling carried as part of an adaptation layer in a transport stream packet in a data stream. This is a multiple reference rejection under MPEP 2131.01).

17. As to Claim 11, Flickinger et al. teaches "adaptation layer is in a packet with the second PID" ([0093], line 1-15 – programming stream in form of DVB transport stream or multiple program transport stream and is understood to contain signaling tables and adaptation fields which may be contained in either one of the transport streams of the MPTS).

18. As to Claim 12, Flickinger et al. teaches "adaptation layer is in a packet with the first PID" ([0093], line 1-15 – programming stream in form of DVB transport stream or multiple program transport stream and is understood to contain signaling tables and

adaptation fields which may be contained in either one of the transport streams of the MPTS).

19. As to Claim 13, Flickinger et al. teaches "adaptation layer is in a packet that is neither the second nor the first PID" ([0093], line 1-15 – multiple program transport stream which may contain multiple PIDs and understood that an adaptation layer may be indicated in any of the PIDs where multiple is understood to mean more than two).

20. As to Claim 14, Flickinger et al. teaches "a computer readable medium storing instructions which, when executed on a programmed processor, carry out the content substitution method according to Claim 1" ([0099], Col. 2, line 4-18, processing steps correspond to software or hardware encompassing processors, computers, CPUs and programmed general purpose processors to include memory).

21. Regarding claim 15:

"receiving data representing content" reads on Flickinger (page 4, [0049], line 7-10 – content corresponds to ads and metadata about the ads are delivered in programming stream where [0049] line 1-7 teaches storing ads are content);

Regarding "the data having at least primary and secondary packet identifiers (PIDs) associated with a first macroblock of original content and second macroblock of substitution content", Flickinger teaches ([0077] line 3-13 – a separate PID is created for each data stream and for each ad program stream which provides an enabled disclosure for the transmitted data having PID associated with macroblock of content (reference "MPEG-2 Transmission" page 2 discloses MPEG data stream comprising video access units and an access unit will be a complete encoded video frame where access units correspond to more than one macroblock associated with a respective packet identifiers). Flickinger does not specifically refer to which PID is the "original" or "substitution" content. In an analogous art, Hoarty teaches data is "a first macroblock of original content and second macroblock of substitution content" by disclosing a method for MPEG type video signal that functions to substitute one macroblock for a corresponding macroblock for multiple video signals or video data streams (Abstract & Col. 2, lines 16-40—teaching MPEG2 signal 1 and MPEG2 signal 2 where source 1 is the first signal (corresponding to "original") and source 2 is the signal to be substituted or overlaid). Hoarty further teaches that in accordance with MPEG2 encoding, for each encoded digital video source, successive contiguous macroblocks are identified over the entire picture area and each macroblock in the picture are is given a unique

numerical address corresponding to "first and second macroblock of original content" (Col. 2, lines 34-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify creating separate PID for each data stream or program stream, original content and substitution content, by associating the original or first data stream or program stream with a first and second macroblock of content for each data stream or program stream as taught by Hoarty in order to accomplish substitution of a macroblock with a corresponding macroblock when receiving multiple program streams with separate packet identifiers;

"placing content having the primary PID into a data stream" (Flickinger [0042], line 1-11, main programming is part of normal stream of information);

Regarding "receiving an initiation flag indicating initiation of a PID mapping operation", "mapping" is described/defined by applicant in [0031], line 13-17 and is interpreted by examiner to indicate the main content from substitutable content. Flickinger solves the problem of automatically detecting a location where a substitution of content is to start and end (0041, line 17-19—teaching avails) and additionally teaches scheduler 912 that receives instructions on when ad should be played or substituted ([0094], line 1-10). The substitution criterion is met as a result of a flag as claimed by applicant corresponds to designating an indicator for automatically detecting the location of where a substitution of content is to start and end as taught by Flickinger. Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the teachings of Flickinger to designate a "flag" for an indicator for the beginning and end of an "avail" and comprising a "scheduler". The

"avails" as taught by Flickinger include open ad breaks designated specifically for the insertion of ads by the television service provider (page 3, 0042, lines 1-4) and using an indicator or "flag" for identifying the location of where ads or data is to be inserted/overlayed in the programming or original data stream would have been obvious to one of ordinary skill in the art.

"mapping content having the secondary PID to the primary PID and placing the mapped content into the data stream" ([0041] line 1-6, ads inserted into programming or inserting any data into any other data stream);

22. As to Claim 16, Flickinger et al. teaches a method of content substitution "carried out in a decoder forming part of a television Set-top box" ([0035], line 12-16 -- integrated component of Set-top box decodes and encodes data and also inserts ads into the data stream).

23. As to Claim 17, Flickinger et al. teaches a method of content substitution comprising the method being "carried out in a hardware state machine" ([0034], line 9-16 -- finite state machine understood to correspond to a hardware state machine).

24. As to Claim 18, Flickinger et al. teaches a method of content substitution comprising method "carried out in a programmed processor" ([0034], line 9-16 — teaching integrated components of Set-top box for inserting ads into data stream



comprise processors [0034], line 9-16, [0035], line 12-16; [99] Col. 2, line 11-16 specification teaches circuit to be programmed general purpose processors).

25. As to Claim 20, Flickinger et al. teaches "substitution criterion is met as a result of an operator input" (0097, lines 1-9 updating or switching among multiple ads is determined by viewer selections).

26. As to Claim 21, Flickinger et al. teaches "substituting comprises using private signaling to select the macroblock of content with the secondary PID and discarding the macroblock of content with the primary PID" (0093, line 7-13 – the ad to be inserted is queued by a digital cue tone and the original ad is substituted).

27. As to Claim 22, Flickinger et al. teaches "substitution is initiated and terminated by private signaling forming part of an adaptation layer of packets in a data stream" ([0093] line 1-15 --data stream carries digital cue tone used for identifying where the substituted ad is to be placed in the data stream).

28. As to Claim 23, Flickinger et al. teaches "wherein the adaptation layer is in a packet with the one of the primary PID and the secondary PID" ([0093], line 1-15 – programming stream in form of DVB transport stream or multiple program transport stream and is understood to contain adaptation fields which may be contained in either one of the transport streams of the MPTS. Flickinger et al. contains an enabled

disclosure for signaling carried as part of the transport stream in an adaptation layer as shown in [0077] lines 1-18 and [0093] lines 1-16 and can be carried in an adaptation field in a transport stream packet as shown in "MPEG-2 Transmission" page 8 and 9 regarding transport packet adaptation layer. Flickinger et al. teaches this limitation for an adaptation layer contained in a transport stream packet in a data stream. This is a multiple reference rejection under MPEP 2131.01).

29. As to Claim 24, Flickinger et al. teaches "wherein the adaptation layer is in a packet that has neither the secondary nor the primary PID" ([0093], line 1-15 – multiple program transport stream which may contain multiple PIDs and understood that an adaptation layer may be may be indicated in any of the PIDs where multiple is understood to mean more than two. Flickinger et al. contains an enabled disclosure for signaling carried as part of the transport stream in an adaptation layer as shown in [0077] lines 1-18 and [0093] lines 1-16 and can be carried in an adaptation field in a transport stream packet as shown in "MPEG-2 Transmission" page 8 and 9 regarding transport packet adaptation layer. Flickinger et al. teaches this limitation for an adaptation layer contained in a transport stream packet in a data stream. This is a multiple reference rejection under MPEP 2131.01).

30. As to Claim 25, Flickinger et al. teaches "a computer readable medium storing instructions which, when executed on a programmed processor, carry out the content substitution method" ([0099], Col. 2, line 4-18, processing steps correspond to software

or hardware encompassing processors, computers, CPUs and programmed general purpose processors to include memory).

31. As to claim 26, Flickinger et al. teaches:

“a content substitution encoder” ([0052], line 1-10 – ads, ad metadata, and programming content are encoded);

“means for receiving input data representing at least one macroblock of main content” ([0052], line 1-10; Figure 9, 901 identifies MPTS transport stream with programming);

“means for receiving input data representing at least one macroblock of substitution content” Flickinger teaches ([0052], line 1-10; Figure 9, 901 identifies MPTS transport stream with ads and ads metadata which allows one of ordinary skill in the art to draw an inference that MPTS transport streams transmit data comprising macroblocks). Flickinger does not teach “substituting a macroblock of original content with a macroblock that comprises substitution content data”. In an analogous art, Hoarty teaches “substituting a macroblock of original content with a macroblock that comprises substitution content data” where a compressed digital overlay controller and method for MPEG type video signal that functions to substitute one macroblock for a corresponding macroblock for multiple video signals or video data streams (Abstract & Col. 2, lines 16-40—teaching MPEG2 signal 1 and MPEG2 signal 2 where source 1 is the first signal (corresponding to “original”) and source 2 is the signal to be substituted or overlaid). Hoarty further teaches that in accordance with MPEG2 encoding, for

each encoded digital video source, successive contiguous macroblocks are identified over the entire picture area and each macroblock in the picture are is given a unique numerical address corresponding to "first and second macroblock of original content" (Col. 2, lines 34-40)). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify substituting a macroblock of the content with the first packet identifier with a corresponding macroblock of the content with the second packet identifier by associating the original, or first data stream or program stream, with a first and second macroblock of content for each data stream or program stream as taught by Hoarty in order to accomplish substitution of a macroblock with a corresponding macroblock when receiving multiple program streams with separate packet identifiers.

"means for initiating a packet identifier (PID) mapper that assigns a primary PID to the main content and assigns a secondary PID to the substitution content" Flickinger teaches ([0093], line 1-15 – DVB transport stream i.e. MPTS understood to identify packets with PIDs when transported where one of ordinary skill in the art would draw and inference that each macroblock of content is assigned a PID). Flickinger does not specifically reference which content is the main or secondary content but teaches multiple content is received. Hoarty further teaches that in accordance with MPEG2 encoding, for each encoded digital video source, successive contiguous macroblocks are identified over the entire picture area and each macroblock in the picture are is given a unique numerical address corresponding to "first and second macroblock of original content" (Col. 2, lines 34-40)). Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify substituting a macroblock of the content with the first packet identifier with a corresponding macroblock of the content with the second packet identifier by associating the original, or first data stream or program stream, with a first and second macroblock of content for each data stream or program stream as taught by Hoarty in order to accomplish substitution of a macroblock with a corresponding macroblock when receiving multiple program streams with separate packet identifiers.;

"means for initiating a private data generator that generates user private data that identifies the main content by the primary PID and substitution content by the secondary PID" ([0095], line 1-5 – the ad insertion module (904) requests the appropriate ad and then inserts the ad with the proper timing);

"means for assembling the private data, the main content mapped to the primary PID and the substitution content mapped to the secondary PID into a data stream" ([0041] line 1-6, ads inserted into programming or inserting any data into any other data stream); [0093], lines 11-15 –An ad insertion module inserts or splices the queued ad according to the cue tone timing and a resulting program stream with the substituted ad is decoded by decoder module and sent to a television or other display device);

32. As to Claim 27, Flickinger et al. teaches the content substitution encoder "implemented using a programmed computer" ([0099], Col. 2, line 11-16 -- encoder corresponds to software, hardware, or circuit which encompasses computers or programmed general purpose processors).

33. As to Claim 28, Flickinger et al. teaches:

“a decoder” (Page 9, Col. 2 -- claim 22 processor configured to decode)

“a receiver receiving data that represents content” ([0052], line 1-10; Figure 9, 901 shows MPTS transport stream received with ads and ads metadata ) “the data having at least first and second packet identifiers (PIDs) associated with a first and second macroblock of content” ([0093], line 1-15 – DVB transport stream i.e. MPTS understood to identify packets with PIDs when transported);

“a content decoder configured to play content having the first PID” (Page 9, Col. 2 -- claim 22 set-top processor configured to transmit signals to a television);

“a controller that determines that a substitution criterion has been met” ([0095], line 1-5, detection module 910 detects the cue tone to indicate an insertion of an ad is to take place);

“a PID mapper that maps content having the second PID to the first PID so that the content originally having the second PID is played” ([0093], lines 11-15 – an ad insertion module inserts or splices the queued ad according to the cue tone timing and a resulting program stream with the substituted ad is decoded by decoder module and sent to a television or other display device).

34. As to Claim 29, Flickinger et al. teaches “decoder resides in a television Set-top box” (Page 9, Col. 2 -- claim 22 set-top processor configured to decode).

***Conclusion***

35. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **ALFONSO CASTRO** whose telephone number is (571)270-3950. The examiner can normally be reached on Monday thru Friday (8am to 5pm EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Koenig can be reached on 571-272-7296. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. C./  
Examiner, Art Unit 2423

/Andrew Y Koenig/  
Supervisory Patent Examiner, Art Unit 2423